AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1.   (Currently Amended) A method of processing image data, the method comprising the steps of:

acquiring a frame of image data; ~~and~~

correcting the frame of image data using a set of correction coefficients corresponding to detector elements of a detector array used to collect the frame of image data; and

compressing a dynamic range of the frame of image data using a dynamic range compression algorithm that utilizes down-sampling, median filtering, and up-sampling.

2.   (Currently Amended) The method of claim 1, ~~further comprising the step of:~~wherein the correcting step

~~normalizing~~normalizes the frame of image data prior to the step of compressing the dynamic range.

3.   (Canceled)

4.   (Original) The method of claim 2, further comprising the step of:

applying a dead-channel-replacement correction after the step of normalizing the frame of image data.

5.   (Original) The method of claim 4, further comprising the step of:

applying a scene-based non-uniformity correction after the step of applying the dead-channel-replacement correction.

6.   (Original) The method of claim 5, further comprising the step of:

applying edge-enhancement after the step of compressing the dynamic range.

7.   (Original) The method of claim 6, wherein applying edge-enhancement comprises the steps of:

blurring input image data;

subtracting blurred input image data from the input image data.

8.   (Original) The method of claim 7, wherein blurring input image data comprises:

applying a first edge filter to the input image data, thereby generating first-edge-filtered data; and

applying a second edge filter to the first-edge-filtered data, wherein first kernel coefficients of the first edge filter and second kernel coefficients of the second edge filter are configured to approximate a resultant gaussian function.

9.   (Original) The method of claim 6, further comprising the step of:

applying noise filtering after the step of applying edge-enhancement.

10.   (Original) The method of claim 9, further comprising the step of:

displaying an image corresponding to the frame of image data after the step

of applying noise filtering.

11.   (Original) A method of dynamic range compression of image data, the

method comprising the steps of:

down-sampling a frame of image data comprising a first array of pixels to

generate a second array of pixels;

applying a first median filter to the second array of pixels to generate a blurred

array of pixels;

up-sampling the blurred array of pixels; and

removing at least a portion of low-frequency gradient data generated by

previous steps from the frame of image data.

12.   (Original) The method of claim 11, wherein said up-sampling

comprises applying bilinear interpolation.

13.   (Original) The method of claim 11, wherein the first median filter is a

large-area median filter.

14. (Original) The method of claim 13, wherein the large-area median filter has a kernel of N=L+M elements, wherein L elements are active elements and M elements are non-active elements.

15. (Original) The method of claim 14, wherein the active elements are arranged in a predetermined pattern.

16. (Original) The method of claim 15, wherein the predetermined pattern is configured as a star-shaped pattern.

17. (Original) The method of claim 15, wherein the predetermined pattern is configured as a checkerboard pattern.

18. (Original) The method of claim 11, further comprising the step of:

applying a second median filter after applying the first median filter, the second median filter having a smaller kernel than the first median filter.

19. (Original) The method of claim 18, further comprising the step of:

applying a mean filter after applying the second the median filter.

20. (Original) The method of claim 19, further comprising the step of:

smoothing output data from the up-sampling, wherein output data from said smoothing provides the low-frequency gradient data.

21. (Original) The method of claim 20, wherein said smoothing comprises:

applying a vertical and horizontal finite-impulse-response (FIR) filter.

22. - 25. (Canceled)

26. (Currently Amended) An apparatus for processing image data,

comprising:

an image-data source; and

a processor unit coupled to the image-data source, the processor unit being

configured to correct a frame of image data using a set of correction coefficients

corresponding to detector elements of a detector array used to collect the frame of

image data, and compress a dynamic range of [[a]]the frame of image data using a

low-frequency-suppression algorithm that uses down-sampling, median filtering, and

up-sampling.

27. (Original) An apparatus for dynamic range compression of image data,

comprising:

a processor unit coupled to an image-data source, the processor unit being

configured to:

down-sample a frame of image data comprising a first array of pixels to

generate a second array of pixels;

apply a first median filter to the second array of pixels to generate a blurred

array of pixels;

up-sample the blurred array of pixels; and

remove at least a portion of low-frequency gradient data thereby generated by the processor unit from the frame of image data.

28.   (Canceled)

29.   (Previously Presented) An apparatus for processing image data, comprising:

a memory; and

a processor coupled to the memory, the processor being configured to execute the method of claim 1.

30.   (Previously Presented) An apparatus for processing image data, comprising:

a memory; and

a processor coupled to the memory, the processor being configured to execute the method of claim 2.

31.   (Canceled)

32.   (Previously Presented) An apparatus for processing image data, comprising:

a memory; and

a processor coupled to the memory, the processor being configured to execute the method of claim 4.

33.   (Previously Presented) An apparatus for processing image data, comprising:

a memory; and

a processor coupled to the memory, the processor being configured to execute the method of claim 5.

34.   (Previously Presented) An apparatus for processing image data, comprising:

a memory; and

a processor coupled to the memory, the processor being configured to execute the method of claim 6.

35.   (Previously Presented) An apparatus for processing image data, comprising:

a memory; and

a processor coupled to the memory, the processor being configured to execute the method of claim 7.

36.   (Previously Presented) An apparatus for processing image data, comprising:

a memory; and

a processor coupled to the memory, the processor being configured to execute the method of claim 8.

37.   (Previously Presented) An apparatus for processing image data, comprising:

a memory; and

a processor coupled to the memory, the processor being configured to execute the method of claim 9.

38.   (Previously Presented) An apparatus for processing image data, comprising:

a memory; and

a processor coupled to the memory, the processor being configured to cooperate with a display to execute the method of claim 10.

39.   (Previously Presented) An apparatus for processing image data, comprising:

a memory; and

a processor coupled to the memory, the processor being configured to execute the method of claim 11.

40.   (Previously Presented) An apparatus for processing image data, comprising:

a memory; and

a processor coupled to the memory, the processor being configured to execute the method of claim 12.

41.   (Previously Presented) An apparatus for processing image data, comprising:

a memory; and

a processor coupled to the memory, the processor being configured to execute the method of claim 13.

42.   (Previously Presented) An apparatus for processing image data, comprising:

a memory; and

a processor coupled to the memory, the processor being configured to execute the method of claim 14.

43.   (Previously Presented) An apparatus for processing image data, comprising:

a memory; and

a processor coupled to the memory, the processor being configured to execute the method of claim 15.

44.   (Previously Presented) An apparatus for processing image data, comprising:

a memory; and

a processor coupled to the memory, the processor being configured to execute the method of claim 16.

45.   (Previously Presented) An apparatus for processing image data, comprising:

a memory; and

a processor coupled to the memory, the processor being configured to execute the method of claim 17.

46.   (Previously Presented) An apparatus for processing image data, comprising:

a memory; and

a processor coupled to the memory, the processor being configured to execute the method of claim 18.

47.   (Previously Presented) An apparatus for processing image data, comprising:

a memory; and

a processor coupled to the memory, the processor being configured to execute the method of claim 19.

48.   (Previously Presented) An apparatus for processing image data, comprising:

a memory; and

a processor coupled to the memory, the processor being configured to execute the method of claim 20.

49.   (Previously Presented) An apparatus for processing image data, comprising:

a memory; and

a processor coupled to the memory, the processor being configured to execute the method of claim 21.

50. – 53.   (Canceled)

54.   (Previously Presented) A computer-readable medium adapted to cause a processor to execute the method of claim 1.

55.   (Previously Presented) A computer-readable medium adapted to cause a processor to execute the method of claim 2.

56.   (Canceled)

57.   (Previously Presented) A computer-readable medium adapted to cause a processor to execute the method of claim 4.

58.   (Previously Presented) A computer-readable medium adapted to cause a processor to execute the method of claim 11.

59.   (Canceled)

60.   (Previously Presented) The method of claim 1, wherein said median filtering comprises applying a median filter to down-sampled image data, the median filter having a kernel of N=L+M elements, wherein L elements are active elements and M elements are non-active elements, the active elements being arranged in a predetermined pattern.

61.   (Previously Presented) A computer-readable medium adapted to a cause a processor to execute the method of claim 60.

62.   (Previously Presented) The apparatus of claim 26, wherein said median filtering comprises applying a median filter to down-sampled image data, the median filter having a kernel of N=L+M elements, wherein L elements are active elements and M elements are non-active elements, the active elements being arranged in a predetermined pattern.

63.   (Previously Presented) The method according to claim 1, wherein the down-sampling, median filtering, and up-sampling are applied in that order.

64.   (Previously Presented) A computer-readable medium adapted to a cause a processor to execute the method of claim 62.

65.   (Previously Presented) The apparatus according to claim 26, wherein

the down-sampling, median filtering, and up-sampling are applied in that order.